

## Claims

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Claim 41 (Currently Amended) A project management workflow system comprising:  
a computer;

a project management program executing in the computer providing:

a means to enter, edit, store and process a set of connected-tasks including a first task,  
each with a condition to initiate the task including completion of one or more other tasks  
or a specified time and an estimated duration, actual duration, or combination of actual  
and estimated duration including a first task;

a function to enter and edit tasks and task connections;

a meansfunction to track completed tasks and partially competed tasks;

a Program Evaluation and Review Technique (PERT) or similar means function to  
determine the critical path, the sequence of connected-tasks based on the conditions to  
start each task and duration such that all tasks are completed in minimum time, and to  
compute the time to complete the critical path;

a means to re-plan or reorder the tasks based on differences between the planned and  
actual execution of tasks or changes in tasks;

a workflow program executing in the computer providing a route means, a sequence of  
process steps with a user for each step to perform the step, and further providing  
means to define a route to perform a task;

such that a first route is defined to perform the first task;

when the first task is started in the project management program, then the first route is  
started in the workflow program;

when the first route is completed, then the first task is completed in the project  
management program and also completed in the project management workflow system  
and the execution of the first route represents the execution of the first task.

Claim 42 (Previously Presented ) The system of Claim 41, wherein the project  
management program provides a second task defined to start at the completion of the  
first task and a second route is defined to perform the second task such that

when the first task is completed, the second task is started in the project management program and then the second route is started in the workflow program;  
when the second route is completed, then the second task is completed in the project management program.

Claim 43 (Presently Amended) The system of Claim 41, wherein the project management program provides a second task defined to start at the completion of the first task and a second route is defined to perform the second task and

a third task with a third route defined to perform the third task at the completion of the second task such that

when the set of conditions to initiate the connected tasks is re-planned or reordered ~~changed~~ so that the third task is defined to start at the completion of the first task rather than the second task, then:

when the first task is completed, the third task is started in the project management program and then the third route is started in the workflow program;

when the third route is completed, then the third task is completed in the project management program.

Claim 44 (Previously Presented) The system of Claim 41, wherein the completion time for the first route in the workflow program is set in the project management program as the completion time for the first task.

Claim 45 (Previously Presented) The system of Claim 41, wherein the project management program provides a user for the first task and the user in the first route is set to the user in the first task.

Claim 46 (Previously Presented) The system of Claim 41, wherein the project management program sends a starting message, including an e-mail or xml message, to the workflow program at the start of the first task to start the first route and the workflow program sends a completion message at the completion of the first route to the project management program to complete the task.

Claim 47 (Previously Presented) The system of Claim 41, wherein a step in the first route is designated as partial completion of the first task such that when the step is completed, the workflow program sends a message, including an e-mail or xml message, to the project management program to indicate partial completion of the first

task.

Claim 48 (Currently Amended) A method to implement a project workflow system comprising the steps:

defining a project management system, including a project management program executing in a computer, providing the steps:

defining a set of connected tasks including a first task where each task is provided with an initiation condition including the completion of one or more specified tasks or a specified time and an estimated duration, actual duration, or combination of actual and estimated duration including a first task;

defining a function to enter and edit tasks and task connections initiation conditions and durations;

defining a function to track completion and partial completion of tasks;

defining a Program Evaluation and Review Technique (PERT) or similar function to determine the critical path, the sequence of tasks such that all tasks are completed in minimum time and to compute the time to complete the critical path;

defining a re-plan function that reorders the sequence of tasks based on the difference between the estimated and actual task durations or changes in tasks; and

defining a workflow system, including a workflow program executing in a computer, providing a route, a sequence of process steps with a user for each step to perform the step;

wherein the method further comprises the steps:

defining a first route to perform the first task;

starting the first route in the workflow system when the first task is started in the project management system;

completing the first task in the project management system when the first route is completed in the workflow system; and

completing the first task in the project workflow system

such that the execution of the first route represents the execution of the first task.

Claim 49 (Previously Presented) The method of Claim 48, wherein the project management system provides a second task defined to start at the completion of the first task,

the method further comprises:

defining a second route to perform the second task;

starting the second route when the first task completes and the second task is started;

completing the second task when the second route is completed.

Claim 50 (Presently Amended) The method of Claim 48, wherein the project management system provides a second task defined to start at the completion of the first task and a second route is defined to perform the second task and

a third task with a third route defined to perform the third task at the completion of the second task;

where the method further comprises:

changing or re-planning the set of initiating conditions for the tasks to start the third task at the completion of the first task;

starting the third task when the first task is completed and the third route is started in the workflow system;

completing the third task when the third route is completed.

Claim 51 (Previously Presented) The method of Claim 48, wherein the completion time for the first route is set in the project management system as the completion time for the first task.

Claim 52 (Previously Presented) The method of Claim 48, wherein the project management system provides a user for the first task and the user in the first route is set to the user in the first task.

Claim 53 (Previously Presented) The method of Claim 48, wherein the project management system sends a starting message, including an e-mail or xml message, to the workflow system at the start of the first task to start the first route and the workflow system sends a completion message at the completion of the first route to the project management system to complete the first task.

Claim 54 (Previously Presented) The method of Claim 48, wherein a step in the first route is designated as partial completion of the first task such that when the step is completed, the workflow system sends a message, including an e-mail or xml message, to the project management system to indicate partial completion of the first task.

Claim 55 (Presently Amended) A method to sequentially execute a first route and then a

~~second route for a workflow system using based on the sequential execution of a first task and a second task in~~ a project management system comprising the steps:  
define where the a workflow system, including a workflow program executing in a computer; ~~provides~~ define a first route, a sequence of process steps with a user for each step to perform the step; ~~and~~  
define a second route; and  
define a the project management system, including a project management program executing in a computer, providing the steps ~~provides:~~  
defining a set of connected tasks where each task is defined with an initiating condition including the completion of one or more other specified tasks or a specified time and an estimated duration, actual duration, or combination of actual and estimated duration;  
~~including a first task connected to~~  
~~a second task such that at the completion of the first task, the second task is started;~~  
define a function to enter and edit tasks and task connections; ~~;~~  
define a function to track completion and partial completion of tasks; ~~;~~  
define a Program Evaluation and Review Technique (PERT) or similar function to determine the critical path, the sequence of tasks such that all tasks are completed in minimum time, and to compute the time to complete the critical path;  
define a re-plan function that reorders the sequence of tasks based on changes between the estimated and actual task durations or task changes;  
wherein the method further provides:  
defining a first task;  
defining a second task to start at the completion of the first task;  
defining the first route to perform the first task and  
defining the second route to perform the second task;  
starting the first route in the workflow system when the first task is started in the project management system;  
completing the first task in the project management system when the first route completes in the workflow system;  
starting the second route in the workflow system when second task starts in the project management system;

completing the second task when the second route is completed such that the first route and second route are sequentially executed corresponding to the sequential execution of the first task and second task.

Claim 56 (Presently Amended) The method of Claim 55, wherein the project management system provides

a third task with a third route defined to perform the third task at the completion of the second task such that

when the set of ~~connected tasks~~ initiation conditions is changed or re-planned so that the third task is defined to start at the completion of the first task rather than the second task, then:

when the first task is completed, the third task is started in the project management system and then the third route is started in the workflow system;

when the third route is completed, then the third task is completed in the project management system such that the sequence of execution of the routes is defined by the sequence of execution of the tasks.

Claim 57 (Previously Presented) The method of Claim 55, wherein the completion time for the first route is set in the project management system as the completion time for the first task.

Claim 58 (Previously Presented) The method of Claim 55, wherein the project management system provides a user for the first task and the user in the first route is set to the user in the first task.

Claim 59 (Previously Presented) The method of Claim 55, wherein the project management system sends a starting message, including an e-mail or xml message, to the workflow system at the start of the first task to start the first route and the workflow system sends a completion message at the completion of the first route to the project management system.

Claim 60 (Previously Presented) The method of Claim 55, wherein a step in the first route is designated as partial completion of the first task such that when the step is completed, the workflow system sends a message, including an e-mail or xml message, to the project management system to indicate partial completion of the first task.